



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995.158	11/27/2001	Lawrence C. Bank	09820.176	9901

7590 12/22/2003

Intellectual Property Department  
DEWITT ROSS & STEVENS S.C.  
Firstar Financial Centre  
8000 Excelsior Drive Suite 401  
Madison, WI 53717-1914

EXAMINER

THOMPSON, CAMIE S

ART UNIT PAPER NUMBER

1774

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/995,158	BANK ET AL.	
	Examiner	Art Unit	
	Camie S Thompson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on \_\_\_\_\_ .
- 2a)  This action is **FINAL**.                      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-13, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-13, 19 and 20 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a)  All   b)  Some \*   c)  None of:
1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_ .
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a)  The translation of the foreign language provisional application has been received.
- 15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>9</u> . | 6) <input type="checkbox"/> Other:   |

**DETAILED ACTION**

1. Applicant's amendment and accompanying remarks filed on October 20, 2003 have been acknowledged.
2. Examiner acknowledges amended claim 1.
3. The rejection of claims 1 and 5 under 35 U.S.C. 103(a) as being unpatentable over Tingley, U.S. Patent Number 5,648,138 in view of Moghe et al., U.S. Patent Number 5,127,783 is withdrawn due to applicant's argument.
4. The rejection of claims 1-3, 5-6, 11-13 and 19-20 under 35 U.S.C. 103(a) as being unpatentable over Ehansi et al., U.S. Patent Number 5,640,825 in view of Moghe et al., U.S. Patent Number 5,127,783 is withdrawn due to applicant's argument.

***Claim Rejections - 35 USC § 112***

5. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear in claim 1 whether or not the structural reinforcing strip comprises of a, b, c and several fasteners or a structural reinforcing strip comprising a, b, c and is attached to a surface that has fasteners.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 7-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Tingley, U.S. Patent Number 5,648,138.

Tingley discloses a wood structural member comprising reinforcing panels (see abstract).

Figures 5a, 5b and 5c of the reference disclose embodiments of the reinforcing panels having two types of fibers. A first fiber is arranged parallel to one another and aligned with the longitudinal direction of the panel and the second fiber is arranged between the first type of fibers and a surface as per instant claim 1 (see column 6, lines 29-40). The reference also discloses a first fiber and a fiber mat as an embodiment as per instant claim 4 and 9 (see column 6, lines 54-68).

The first fiber can include carbon and fiberglass as per instant claims 1 and 11 (see column 6, lines 29-68). Additionally, the reference discloses that the fibers are embedded in a polymer matrix such as epoxy resin as per instant claims 1 and 11 (see column 7, lines 1 and 2). Figure 5a discloses nondirectional fibers distributed substantially across the strip as per instant claims 3 and 10. It is also shown in the figures of the reference that the parallel fibers are in bundles spaced transversely across the panel and evenly spaced as per instant claims 2, 7 and 8.

Column 8, lines 27-30 of the reference disclose that the fiber to resin volume ratio is 60/40 as per instant claim 13.

Art Unit: 1774

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 5, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tingley, U.S. Patent Number 5,648,138 in view Hohman, U.S. Patent Number 5,637,375.

Tingley discloses a wood structural member comprising reinforcing panels (see abstract).

Figures 5a, 5b and 5c of the reference disclose embodiments of the reinforcing panels having two types of fibers. A first fiber is arranged parallel to one another and aligned with the longitudinal direction of the panel and the second fiber is arranged between the first type of fibers and a surface as per instant claim 1 (see column 6, lines 29-40). Figure 5a discloses nondirectional fibers distributed substantially across the strip as per instant claim 1. Additionally, the reference discloses that the fibers are embedded in a polymer matrix such as epoxy resin as per instant claim 1 (see column 7, lines 1 and 2). The Tingley reference does not disclose that the nondirectional fibers are continuous as per instant claim 5. Hohman teaches fiber reinforced composite products that comprise of a first and second fiber wherein the first fibers are elongated, continuous parallel fibers and the second fiber is continuous and nondirectional as per instant claims 19 and 20 (see Figures 1 and 2 and column 3, line 6-column 4, line 9).

Additionally, Hohman teaches that the parallel fibers extend along the length of the composite (see column 3, lines 22-23). The continuous fibers provide strong reinforcement when embedded into a matrix. Therefore, it would have been obvious to one of ordinary skill in the art

Art Unit: 1774

to have continuous nondirectional fibers in the mat of the strip in order to achieve a strong composite capable of withstanding large loads.

10. Claims 1, 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tingley, U.S. Patent Number 5,648,138 in view of Ehansi et al., U.S. Patent Number 5,640,825. Tingley discloses a wood structural member comprising reinforcing panels (see abstract). Figures 5a, 5b and 5c of the reference disclose embodiments of the reinforcing panels having two types of fibers. A first fiber is arranged parallel to one another and aligned with the longitudinal direction of the panel and the second fiber is arranged between the first type of fibers and a surface as per instant claim 1 (see column 6, lines 29-40). Figure 5a discloses nondirectional fibers distributed substantially across the strip as per instant claim 1. Additionally, the reference discloses that the fibers are embedded in a polymer matrix such as epoxy resin as per instant claim 1 (see column 7, lines 1 and 2). Tingley does not disclose that the strip is flexible and may be coiled into a roll as per instant claim 6. Ehansi discloses a reinforced structure using a composite strap material as per instant claims 1 and 19. Also, the reference discloses that the composite can be in individual strands or in multiple strands that are weaved together to form a substantially flat tape wherein the fibers are oriented in selected ones of longitudinal, transverse and of combinations thereof as per instant claim 1 (see column 2, lines 38-47). Additionally, the reference discloses in column 5 that the strap is flexible and can be applied to the contour of the surface as per instant claim 6. The flexibility of the strip allows it to simplify construction and be used in new designs. Therefore, it would have been obvious to one of ordinary skill in the art to have a composite strip that is flexible so that it can be coiled in to a roll for construction design but yet have external reinforcement. Claim 6 is a product-by-process claim. Even though

Art Unit: 1774

product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113. The strip of instant claim 6 being coiled into a roll does not make it a different product than the product from the reference strip. The instant strip is the same strip as in both the Tingley and Ehansi references. The Tingley reference does not disclose that the parallel fibers are carbon and the nondirectional fibers include glass fibers as per instant claim 12. Although Ehansi does not specifically disclose that the parallel fibers include glass and carbon fibers and the nondirectional fibers include glass fibers, Ehansi does disclose that glass and carbon fibers are high strength fibers. Therefore, it would have been obvious to one of ordinary skill in the art to use carbon fibers as the parallel fibers and glass fibers and the nondirectional fibers in order to ensure that the reinforced composite has sufficient strength to handle severe loads caused by earthquakes.

### *Response to Arguments*

11. Applicant's arguments filed October 20, 2003 have been fully considered but they are not persuasive. Applicant argues the rejection of claims 1-13 under 35 U.S.C. 112, second paragraph. Applicant argues that claim 1 recites a strip having elements a, b and c affixed to the surface of a structure by several fasteners inserted through the strip and into the structure. It is unclear in claim 1 as to whether the strip comprises a, b and c and fasteners or the strip comprises a, b and c and is attached to a surface that has fasteners. As written, the interpretation

Art Unit: 1774

of claim 1 is subjective. Applicant argues that the Tingley reference does not disclose nondirectional fibers. Figure 5a of the Tingley reference discloses parallel fibers (24) and nondirectional fibers (28). The Tingley reference also discloses a resin matrix wherein the fibers are encased. The Tingley reference meets all the limitations of claim 1. The obviousness rejections of Tingley in view of Moghe and Ehansi in view of Moghe have been withdrawn due to applicant's argument.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone number for the Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY  
SUPERVISOR  
ART UNIT 1700

*Cynthia H. Kelly*